SWITCHING & CONTROL

Use with Model 707A and 708A switching matrix mainframes

7073

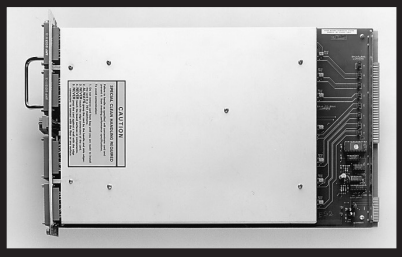
- 30MHz bandwidth
- Signals 2µV to 200V
- >80dB path isolation

Ordering Information

7073 8x12 Coaxial Matrix Card

Extended warranty, service, and calibration contracts are available.

7074-D



- Dry reed contacts
- 3-pole Form A switching (HI, LO, GUARD)
- 200V, 1A signal levels

Ordering Information

7074-D Eight 1x12, Dry Reed General Purpose Multiplexer

Extended warranty, service, and calibration contracts are available.

Accessories Supplied

8 spare backplane jumpers

Coaxial Matrix Card

8×12

The Model 7073 Coaxial Matrix Card provides fully shielded signal lines for excellent noise rejection in test systems. Isolation jumpers on the card can be removed to disconnect the card signal paths from the coaxial analog backplane, and the shield provides >80dB isolation at 1MHz between signal paths to minimize crosstalk and coupling of adjacent signals. The 30MHz bandwidth and the 50Ω characteristic impedance minimize distortion and overshoot in high frequency and digital signals. Contact potential for the Model 7073 is specified at <2µV, which is useful when measuring sensitive voltage signals. The card can also switch voltages up to 200V. Current capacity of the matrix card is 1A for switching moderate power to test devices and circuits.

ACCESSORIES AVAILABLE

7051-2	BNC to BNC Cable, 0.6m (2 ft)
7051-5	BNC to BNC Cable, 1.5m (5 ft)
7051-10	BNC to BNC Cable, 3m (10 ft)
7754-3	BNC to Alligator Cable, 0.9m (3 ft)
7755	50Ω Feed-Through Terminator

MATRIX CONFIGURATION: 8 rows by 12 columns.
CROSSPOINT CONFIGURATION: 1-pole Form A.
CONNECTOR TYPE: BNC (HI, Chassis).
MAXIMUM SIGNAL LEVEL: 200V, 1A, 30VA peak (resistive load). 200V maximum between any 2 pins or chassis.
CONTACT LIFE: Cold Switching: 10^7 closures. **At Maximum Signal Level:** 10^5 closures.
PATH RESISTANCE (per conductor): <0.5Ω initial, <1Ω at end of contact life.
CONTACT POTENTIAL: <2µV per contact.
OFFSET CURRENT: <200pA, 10pA typical.
PATH ISOLATION*: $>10^{10}$Ω, <0.3pF.
CROSSTALK*: 1MHz, 50Ω load: <–80dB. **10MHz, 50Ω load:** <–65dB. **1MHz, 1MΩ load:** <–55dB.
*Path isolation and crosstalk specified with backplane disconnect jumpers removed.
INPUT ISOLATION: 10^9Ω, 220pF nominal.
RELAY DRIVE CURRENT (per crosspoint): 20mA.
RELAY SETTLING TIME: <15ms.
INSERTION LOSS (50Ω source): 50Ω load, 10MHz: <0.5dB. **1MΩ load, 1MHz:** <0.2dB.
3dB BANDWIDTH (50Ω load): 30MHz typical.
EMC: Conforms to European Union Directive 89/336/EEC.
SAFETY: Conforms to European Union Directive 73/23/EEC (meets EN61010-1/IEC 1010).
ENVIRONMENT: Operating: 0° to 50°C, up to 35°C at 70% R.H. **Storage:** –25° to 65°C.

General Purpose Multiplexer

Eight 1×12, Dry Reed

The Model 7074-D consists of eight banks of independent 1×12 multiplexer switching. Each bank has three switched circuits (HI, LO, Guard) and is connected through jumpers on the switching card to one of eight general-purpose signal paths, which provide automatic interconnect between switching cards. Jumpers can be removed to isolate any bank of switching or repositioned to cascade banks into longer switching configurations (1×24, 1×36, dual 1×48, 1×96, etc.) or banks can be connected in a tree configuration for improved isolation.

ACCESSORIES AVAILABLE

BANK CONNECTOR ACCESSORIES

7074-CIT	Contact Extraction Tool
7074-HCT	Hand Crimping Tool
7074-KIT	Mass Terminated Plug with Contacts
7074-MTC-20	Mass Terminated Cable Assembly, 6m (20 ft)
7074-MTR	Mass Terminated Receptacle with Contacts
7074-RTC	Relay Test Shorting Connector

ROW CONNECTOR ACCESSORIES

7078-CIT	Contact Insertion and Extraction Tools
7078-HCT	Hand Crimping Tool
7078-KIT	Mass Terminated Plug with Contacts
7078-MTC-5	Mass Terminated Cable Assembly, 1.5m (5 ft)
7078-MTC-20	Mass Terminated Cable Assembly, 6m (20 ft)
7078-MTR	Mass Terminated Receptacle with Contacts

MULTIPLEX CONFIGURATION: Eight 1×12 banks. Adjacent banks can be connected together. Jumpers can be removed to isolate any bank from the backplane.
CONTACT CONFIGURATION: 3 pole Form A (HI, LO, GUARD).
CONNECTOR TYPE: Four 75-pin connectors for bank connections, one 38-pin connector for row connections.
MAXIMUM SIGNAL LEVEL: 200V, 1A carry/0.5A switched, 10VA peak (resistive load).
COMMON MODE VOLTAGE: 200V maximum between any 2 pins or chassis.
OFFSET CURRENT: <100pA.
ISOLATION:
Bank: $>10^{10}$Ω, <10pF.
Channel: $>10^{10}$Ω, <10pF.
Differential: Configured as a 1×12: $>10^9$Ω, 55pF nominal.
Common Mode: Configured as a 1×12: $>10^9$Ω, 300pF nominal.
CROSSTALK:
Bank: <–55dB at 1MHz, 50Ω load.
Channel: <–55dB at 1MHz, 50Ω load.
CONTACT LIFE: Cold Switching: 10^8 closures.
At Maximum Signal Levels: 10^5 closures
CONTACT POTENTIAL: (per contact pair, <1 minute after actuation): <5µV.
CHANNEL RESISTANCE: Initial: <0.6Ω.
At End of Contact Life: <1.6Ω.
RELAY DRIVE CURRENT: (per relay): 15mA.
INSERTION LOSS (1MHz, 50Ω source, 50Ω load):
Configured as a 1×12: 0.1dB typical.
3dB BANDWIDTH (50Ω load):
Configured as a 1×12: 5MHz typical.
RELAY SETTLING TIME: <3ms.
EMC: Conforms to European Union Directive 89/336/EEC.
SAFETY: Conforms to European Union Directive 73/23/EEC (meets EN61010-1/IEC 1010).
ENVIRONMENT: Operating: 0° to 50°C, up to 35°C @ 70% R.H. **Storage:** –25° to 65°C.

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